



Recreational Vehicles & Child Occupants

Guidelines & recommendations to provide to parents

California Department of Public Health
Vehicle Occupancy Safety Program (VOSP)
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Overview

- RV Facts & Demographics
- Classes of RV's
- Federal Motor Vehicle Safety Standard 208
- Seat Belt Construction in RV's
- RV Crash Testing Status
- Injury Risks Among Rear Seated Passengers
- Guidelines for Parents
- Educational Materials for Parents

RV Facts, Demographics & Crash Data

FACTS & DEMOGRAPHICS*

- Nationwide 30 million RV enthusiasts (including renters)
- RV ownership 8.9 million households
- Average age 48 years
- Largest increase of age category ages 35-54
- 39% of RV'rs have children under the age of 18 living at home

RV CRASH INJURY ESTIMATES**

- Hospitalization & fatality data limited
- 75,000 hospitalizations per year

**Recreational Vehicle Industry Association (RVIA)*

***Federal Motor Carrier Safety Administration (FMCSA)*

Classes of RV's



Class A



Class B



Class C

Class A



- Largest of motor homes
- Built on a bus chassis (not required to meet bus occupant safety standards for rear seating)
- Weigh 15,000-30,000 pounds (not required to meet Federal seat belt standards for rear occupants)

Class B



- Van conversions
- Weight 6,000-8,000 pounds
- Required to meet Federal seat belt standard for front occupants and passenger testing but not for rear occupants for this weight class.
- Some manufacturers meet Federal standards and do independent testing.

Class C



- Constructed on a van chassis
- Weight 10,000-12,000 pounds
- Required to meet Federal seat belt standards for front occupants only. But not for rear occupants



Federal Motor Vehicle Safety Standards & Regulations

(Title 49, Code of Federal Regulations, Part 571)

Standard No. 208 - Occupant Crash Protection Standard:

- Type 1 (lap-belt only) or Type 2 (lap-shoulder belt)
- Performance requirements for anthropomorphic test dummies
- Passenger Cars, Multipurpose Passenger Vehicles, Trucks and Buses with a gross vehicle weight rating of 4,536 kg (10,000 lbs.) or less, and buses (driver's seat only)
 - ***EXCLUDES (Class A and C RV's) due to exceeding 10,000 lbs.***

Federal Motor Vehicle Safety Standards & Regulations

(Title 49, Code of Federal Regulations, Part 571)

Standard No. 208 - Occupant Crash Protection Standard:

➤ Specifically for “Motor Homes” (Recreational Vehicles)²

1. Rear designated seats in motor homes are excluded from the rear lap/shoulder belt requirements
2. The rear seats in LTVs (Light Truck and Vans) carrying chassis-mount campers with a weight greater than 3,855 kg (8,500 lbs.) and no greater than 4,536 kg (10,000 lbs.) would need to be equipped with a lap belt only (front driver and passenger seat only)

➤ *Usually excludes (Class B van conversions – 6-8,000 lbs.)*

Rear Seat Belt Construction in RV's



- Older RV's seat belts anchored to wooden joists
- Currently:
 - Anchored to vehicle chassis (frame)

RV Crash Testing Status

- NHTSA does not crash test RV's (except Class B in 1970's)



Roadtrek Class B Crash Test

Roadtrech Motorhomes, Inc.

- Class B
- United States
- Adult passengers
- Not child occupant or CSR's



Bailey RV Crash Test (U.K.)

Bailey Motorhomes

- Class C
- United Kingdom
- Adult & child passengers in seat belts
- Not CSR's

Bailey Crash Tests



VIDEO 1:

<https://www.youtube.com/watch?v=1iKwg2672UM>



VIDEO 2:

<https://www.youtube.com/watch?v=fcJHM9uacA0>

RV Crash Outcomes



RV CRASH 1

- Class A
- Tire blowout
- Hit guardrail & overturned



<http://flaglerlive.com/16920/i95-rv-crash/>

RV CRASH 2

- Class A
- Early morning loss of control & overturned



RV CRASH 3

- Class A
- Loss of control



RV CRASH 4

- Class B
- Loss of control



OVERVIEW

Injury Risks Rear-Seated RV Passengers

1. RV's are *not required* to have:
 - Rear occupant crash testing or
 - Meet Federal seat belt standard 208 for rear seating Rear bench seats that have seat belts are anchored either directly onto steel frame of the vehicle or on a steel bar anchored to the RV chassis
 - During a collision, the wooden bench supports could collapse
3. Kitchen equipment and cabinets even when anchored onto the steel frame of the vehicle, during a collision, increases the risk of collapsing or becoming a projectile.
4. Storage supplies can also become projectiles

Guidelines for Parents

**Three alternatives to consider
Before traveling with a child in an RV**





1. Best Alternative

Rent or purchase a non-motorized, tow-able RV", so the child can ride safely while properly restrained in a passenger vehicle that is pulling the RV.

- Ensure driver is experienced and familiar with towing a trailer
- Reminder: High-profile vehicles are restricted in high winds, inclines, braking, and have risks making sharp turns and backing



Fifth Wheel



Trailer



Tent Trailer



Truck Camper



2. Second Best Alternative

Drive with the child properly restrained in a passenger vehicle and follow the RV



Class A



Class B



Class C



3. Least Best Alternative

For those with a personal RV, have custom captain chairs that comply with Federal seat belt standards installed*

- Risk of cabinets and kitchen equipment anchored into the wooden flooring and joists which can break apart during a collision
- Other storage items becoming projectiles

**Never install a car seat or booster seat on a rearward- or side-facing RV seat*

Reminder to Parents

- RV's are not crash tested
- Rear RV seating-not required to meet Federal seat belt requirements
- If choose an A,B or C Class, never install a car seat or booster seat on a rearward' or side-facing RV seat
- During a crash:
 - Even when belted, seat benches can collapse
 - Kitchen equipment & cabinets can become projectiles
- Other safety tips:
 - Never leave a child alone in an RV
 - Risks-infants & toddlers (falls, burns, suffocation, poisoning, etc.)



Materials for Parents

Alternatives for Parents



Recreational Vehicles (RV) & Child Passengers


Planning on renting a recreational vehicle (RV), or traveling with family or friend in one, with your child?

Before traveling with your child in an RV, learn of the risks and choose the best alternative that is the safest for your child.

1. Motorized RV's (Class A, B, C and C+) are *not required* to have rear occupant crash testing or meet Federal seat belt standards for rear seating, depending on the weight of the RV. Check with each manufacturer if it meets seat belt standards.
2. Kitchen equipment anchored to wooden frames and wooden cabinets can collapse or become projectiles during a collision.
3. Other travel supplies, as well as passengers can also become projectiles and injure occupants during a collision.
4. Car Seats & booster seats are never to be used in rear-facing or side-facing seating.
5. Never leave a child alone in an RV or motor vehicle.

#1 Best Alternative


Rent or purchase a **"non-motorized/tow-able RV"** ([fifth wheel](#), [trailer](#), [tent trailer](#), [truck camper](#)) so your child can ride properly restrained in the passenger vehicle that tows the RV. Remember as with any RV the driver must be experienced and familiar with towing a trailer behind their vehicle. RV's are high-profile vehicles, so they can be restricted during high wind conditions and can be difficult in making sharp turns and backing.






#2 Second Best Alternative


Drive the child while properly restrained in a passenger vehicle and follow the RV (Class A, B, or C)


#3 Least Best Alternative


For RV owners or those considering in purchasing one, can have captain chairs custom made in the back of the RV that comply with Federal seat belt safety standards. However there is still a significant risk that during a collision, cabinets, kitchen equipment and storage items can become projectiles and injure passengers.

More RV & Child Safety Information at www.ProCarSeatSafety.com



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RV Baby Safety Items



Baby Proof Your RV

Whether you are renting an RV or traveling with family or friends in one, childproofing the RV will help keep your trip a pleasant one and away from the emergency room.

When an infant or toddler is brought into an RV, they are exposed to a new environment. It is natural for them to explore to learn. Just like in your home constant supervision is not always possible so check for:

- ☐ Unexpected areas where toddlers can climb that increases their risk of a fall, burn, cut, poisoning, etc.
- ☐ Doors and cabinets where a child can get inside and become trapped-closets, bathroom, bedroom, or RV itself
- ☐ Stairs/exit ways, doors, windows (screens are not meant to keep children from falling through)
- ☐ Loose straps, duffel bag cords, etc. within a child's reach can become a strangulation risk
- ☐ Electrical heaters-make sure a baby cannot put their fingers or other item in resulting in fire or burn risk
- ☐ Low level storage doors, vents, utility access, etc. where a toddler can enter
- ☐ Possible access to medications, chemicals, etc.
- ☐ Hot water temperature. Make sure temperature is less than 120 degrees



Cabinet Locks



Door Knob Covers



Outlet Covers



Oven Knob Covers



Baby Safety Travel Gate



Travel Baby Bed



Travel Toddler Bed



Baby Changing Pad



Travel Baby Crib



Travel High Chair

Never leave a child alone in an RV

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www.procarseatsafety.com/health-education.html



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